FIG.1

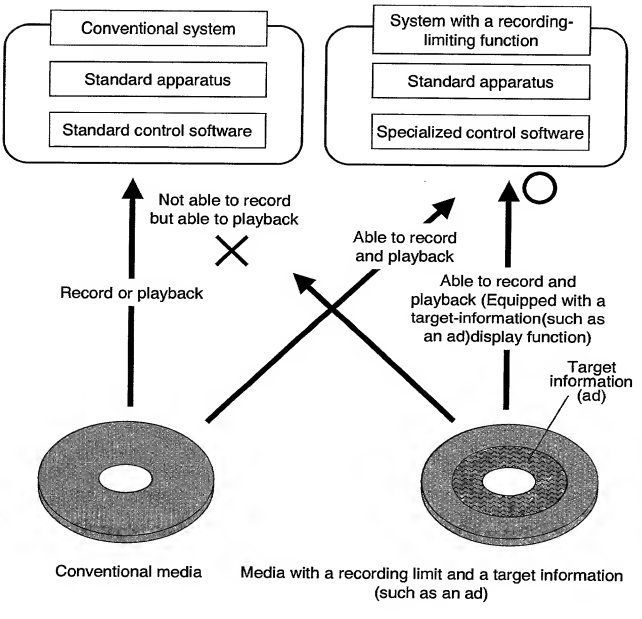

Conventional system
Standard apparatus
Standard control software
System with a recording-limiting function
Standard apparatus
Specialized control software
Not able to record but able to playback
Able to record and playback
Record or playback
Able to record and playback (Equipped with a target-information(such as an ad)display function)
Target information (ad)
Conventional media
Media with a recording limit and a target information (such as an ad)

FIG.2

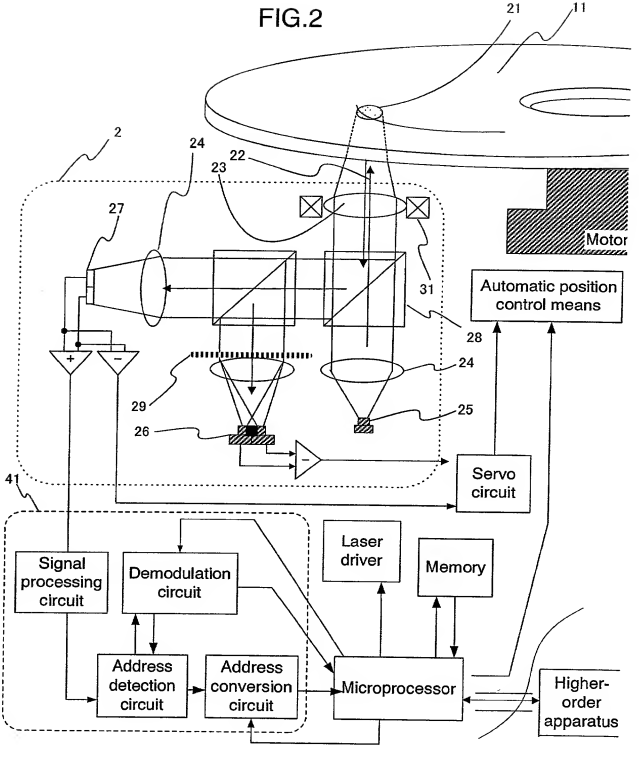

21
11
2
24
22
23
27
Motor
31
Automatic position control means
28
24
29
25
26
41
Servo circuit
Laser driver
Memory
Signal processing circuit
Demodulation circuit
Address detection circuit
Address conversion circuit
Microprocessor
Higher-order apparatus

FIG.3

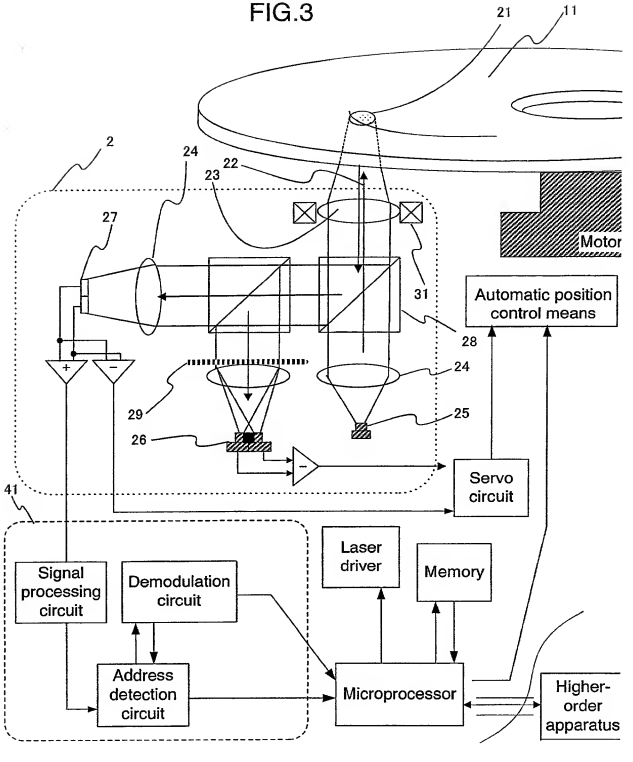

21
11
2
24
22
23
27
Motor
31
Automatic position control means
28
24
29
25
26
41
Servo circuit
Laser driver
Memory
Signal processing circuit
Demodulation circuit
Address detection circuit
Microprocessor
Higher-order apparatus

FIG.4

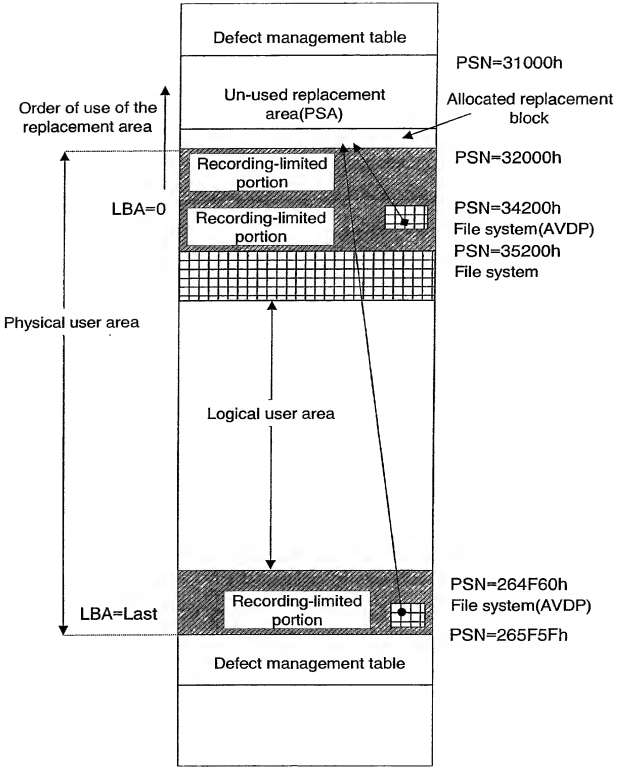

Defect management table
PSN=31000h
Un-used replacement area(PSA)
Allocated replacement block
Order of use of the replacement area
PSN=32000h
Recording-limited portion
LBA=0
Recording-limited portion
PSN=34200h
File system(AVDP)
PSN=35200h
File system
Physical user area
Logical user area
PSN=264F60h
File system(AVDP)
LBA=Last
Recording-limited portion
PSN=265F5Fh
Defect management table

FIG.5

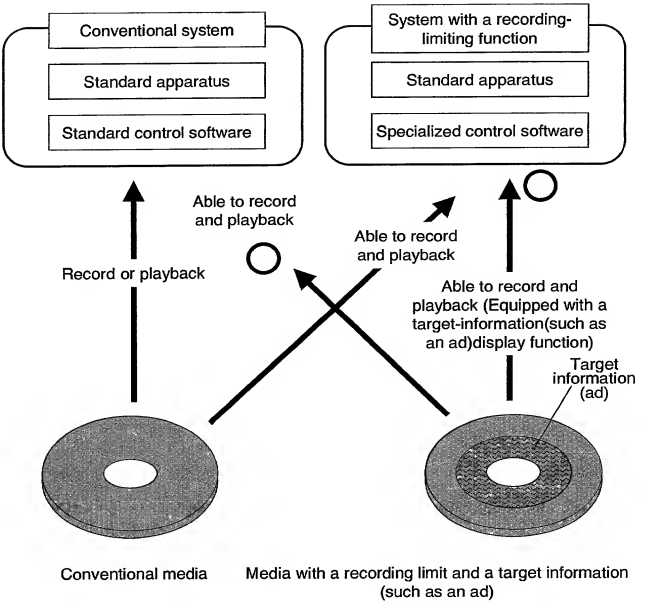

Conventional system
Standard apparatus
Standard control software
System with a recording-limiting function
Standard apparatus
Specialized control software
Able to record and playback
Able to record and playback
Record or playback
Able to record and playback (Equipped with a target-information(such as an ad)display function)
Target information (ad)
Conventional media
Media with a recording limit and a target information (such as an ad)

FIG.6

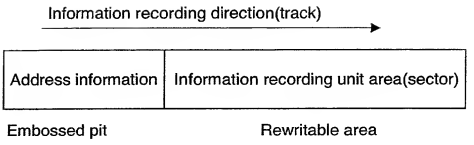

Information recording direction(track)
Address information
Information recording unit area(sector)
Embossed pit
Rewritable area

FIG.7

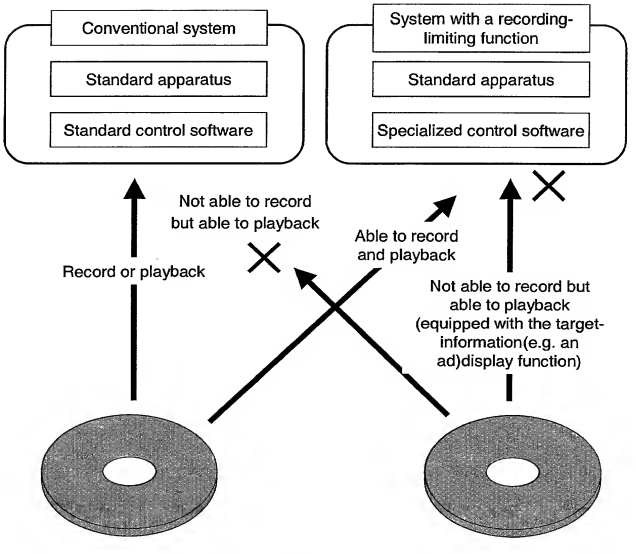

Conventional system
Standard apparatus
Standard control software
System with a recording-limiting function
Standard apparatus
Specialized control software
Not able to record but able to playback
Able to record and playback
Record or playback
Not able to record but able to playback (equipped with the target-information(e.g. an ad)display function)
Conventional media
Media with a recording limit and a target information (such as an ad) have been erased

FIG.8

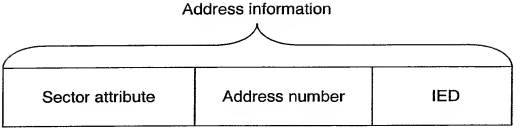


FIG.9

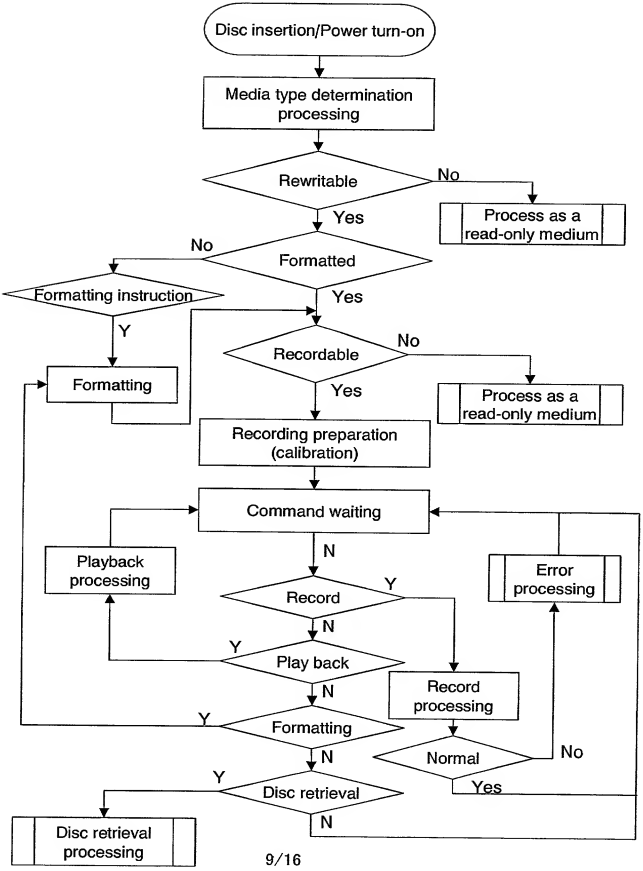

Disc insertion/Power turn-on
Media type determination processing
Rewritable
No
Process as a read-only medium
Yes
No
Formatted
Formatting instruction
Yes
Y
Recordable
No
Formatting
Yes
Process as a read-only medium
Recording preparation (calibration)
Command waiting
N
Playback processing
Record
Y
Error processing
N
Y
Play back
N
Record processing
Y
Formatting
N
Normal
No
Y
Disc retrieval
Yes
N
Disc retrieval processing

FIG.10

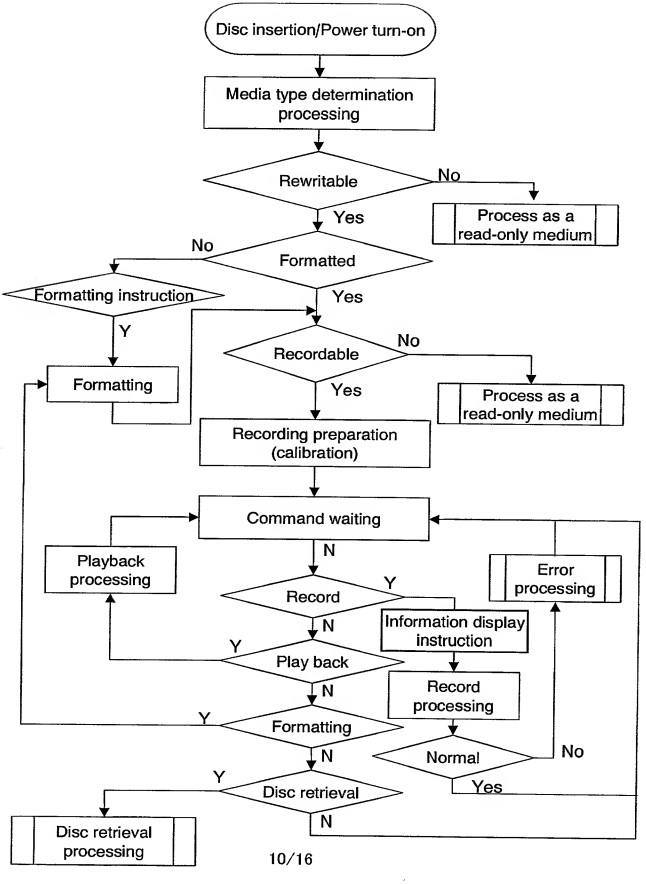

Disc insertion/Power turn-on
Media type determination processing
Rewritable
No
Process as a read-only medium
Yes
No
Formatted
Formatting instruction
Yes
Y
Recordable
No
Formatting
Yes
Process as a read-only medium
Recording preparation (calibration)
Command waiting
N
Playback processing
Record
Y
Error processing
N
Information display instruction
Y
Play back
N
Record processing
Y
Formatting
N
Normal
No
Y
Disc retrieval
Yes
N
Disc retrieval processing

FIG.11

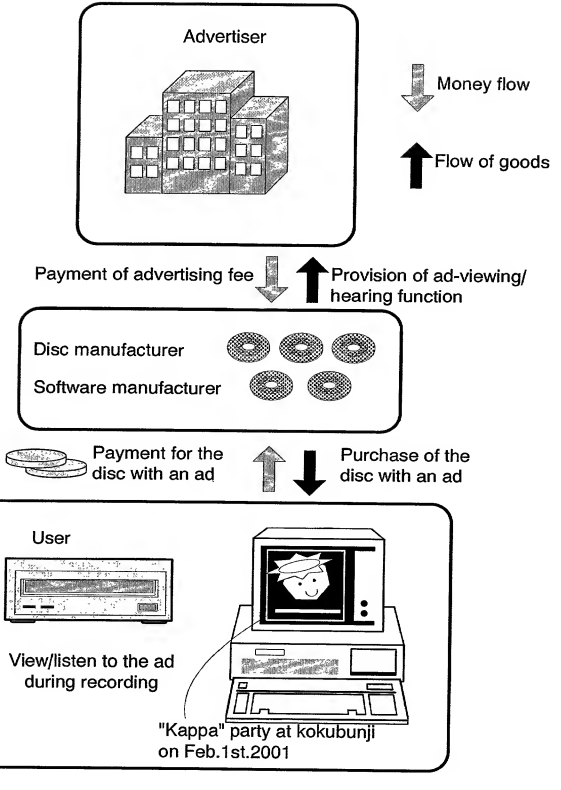

Advertiser
Money flow
Flow of goods
Payment of advertising fee
Provision of ad-viewing/ hearing function
Disc manufacturer
Software manufacturer
Payment for the disc with an ad
Purchase of the disc with an ad
User
View/listen to the ad during recording
"Kappa" party at kokubunji on Feb.1st.2001

FIG.12

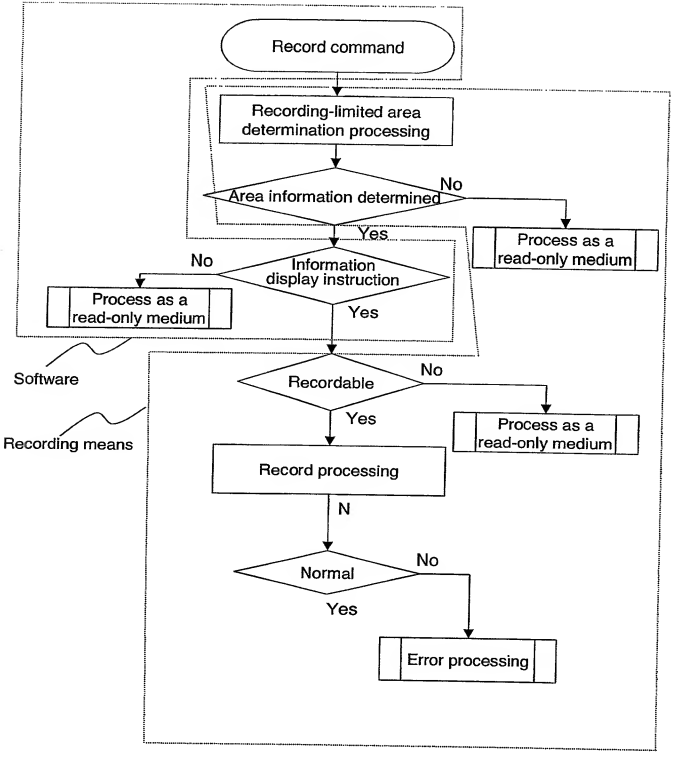

Record command
Recording-limited area determination processing
Area information determined
No
Yes
Process as a read-only medium
Information display instruction
No
Yes
Process as a read-only medium
Software
Recordable
No
Yes
Process as a read-only medium
Recording means
Record processing
N
Normal
No
Yes
Error processing

FIG.13

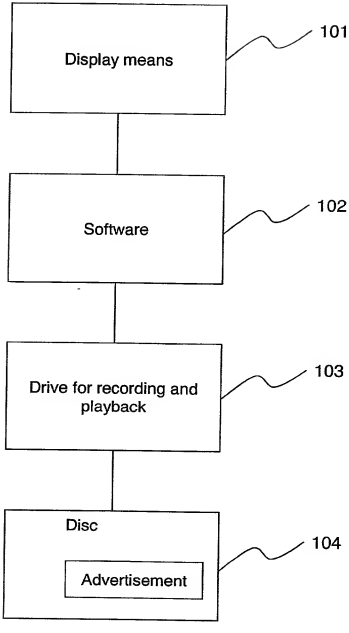

Display means
101
Software
102
Drive for recording and playback
103
Disc
Advertisement
104

FIG.14

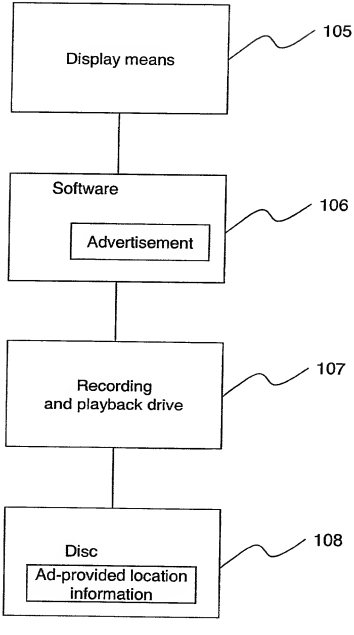

Display means
105
Software
Advertisement
106
Recording
and playback drive
107
Disc
Ad-provided location
information
108

FIG.15

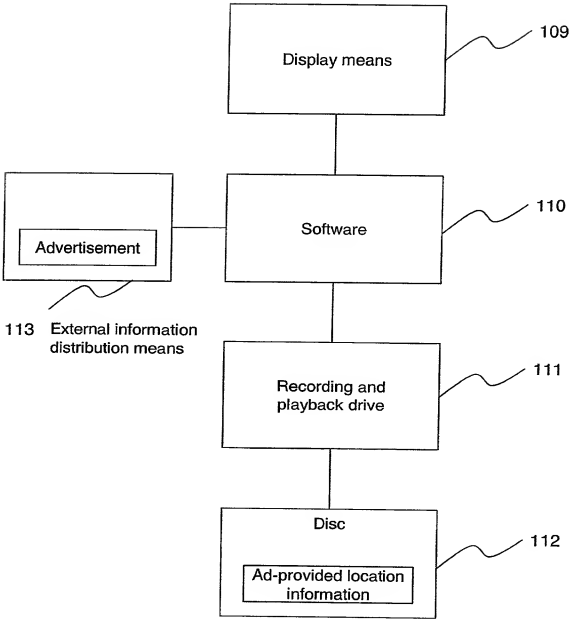
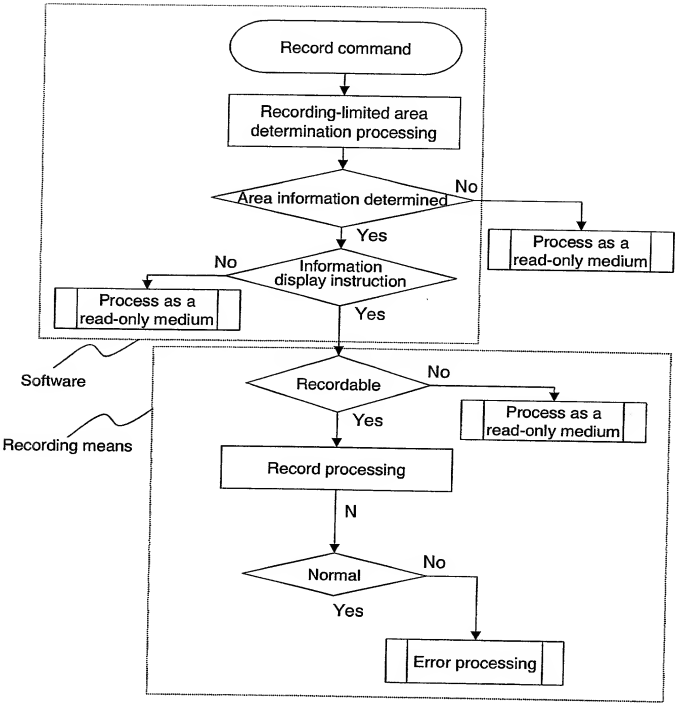

Display means
109
Advertisement
Software
110
113 External information distribution means
Recording and playback drive
111
Disc
Ad-provided location information
112

FIG.16


Record command
Recording-limited area determination processing
Area information determined
No
Yes
Process as a read-only medium
No
Information display instruction
Process as a read-only medium
Yes
Software
Recording means
Recordable
No
Process as a read-only medium
Yes
Record processing
N
Normal
No
Yes
Error processing